

In the Specification:

At page 1 after the title, please insert the following sentence:

—This is a continuation of PCT Patent Application No. PCT/US98/15070, filed July 20, 1998, which is a continuation-in-part of U.S. Patent Application Serial No. 08/897,857, filed July 21, 1997.--

In the Claims:

Please ~~cancel~~ claims 1-43, without prejudice.

Please add new claims 44-111, as follows:

44. A method of verifying the authenticity of goods, comprising the steps of:
generating one or more combination codes, wherein each combination code has a random portion and a non-random portion;
encrypting the one or more combination codes;
associating the encrypted combination codes with one or more goods, wherein each of the goods has a unique encrypted combination code; and
examining goods to verify whether they are authentic, wherein examining the goods comprises:

reading the code associated with one of the one or more goods;
decrypting the code; and
evaluating the decrypted code to verify whether the good is authentic.

45. The method of claim 44, wherein the step of generating one or more combination codes comprises the steps of:

generating one or more random codes; and
combining the one or more random codes with a non-random code.

46. The method of claim 45, wherein combining the one or more random codes with a non-random code is selected from the group consisting of concatenating the non-random code to an end of the random code, concatenating the non-random code to a beginning of the random code and interposing the non-random code within the random code.

47. The method of claim 44, wherein the step of examining goods further comprises the steps of:

decrypting the code associated with each of the goods; and
determining whether the goods are authentic based on the decrypted code.

48. The method of claim 44, wherein the step of reading the code comprises scanning the code.

49. The method of claim 44, wherein the step of evaluating the decrypted code comprises determining whether the decrypted code contains the non-random portion of the combination codes.

50. The method of claim 49, wherein the step of determining whether the decrypted code contains the non-random portion comprises visually inspecting the decrypted code.

51. The method of claim 44, wherein the step of evaluating the decrypted code comprises comparing the decrypted code to the non-random portion of the combination codes.

52. The method of claim 51, further comprising the step of determining whether the combination code has been previously used if the random portion matches a portion of the decrypted code.

53. The method of claim 44, wherein the method further includes detecting a diversion of goods from a desired channel or channels of distribution, wherein each desired channel of distribution has a unique encryption key to perform the encryption of the combination codes, and wherein examining of the goods comprises verifying whether an encryption key used for encrypting the combination codes on the inspected goods within the desired channel or channels of distribution matches the encryption key which is uniquely dedicated for the desired channel or channels of distribution, thereby identifying whether a diversion of goods has occurred.

54. The method of claim 53, wherein the step of verifying further comprises:
inspecting the goods within the desired channel or channels of distribution;
decrypting the codes on the goods with a decryption key; and
examining the decrypted codes, thereby determining whether a diversion of goods has occurred.

55. The method of claim 54, wherein examining the decrypted codes comprises comparing the decrypted codes to the non-random portion of the combination codes, wherein a match indicates no diversion of goods.

56. The method of claim 53, further comprising the step generating a pair of encryption keys, wherein one key is used to encrypt combination codes and the other is used to decrypt the codes within the desired channel or channels of distribution.

57. The method of claim 56, further comprising the step of providing a manufacturer with the encryption key to encrypt combination codes.

58. The method of claim 53, further comprising the step of placing the goods into commerce after the encrypted combination codes have been associated with the goods.

59. The method of claim 54, wherein the step of inspecting the goods comprises reading the codes on the goods with a scanner.

60. The method of claim 54, wherein the step of examining the decrypted codes comprises visually examining the codes for the expected non-random portion of the combination codes.

61. The method of claim 44, wherein the non-random portion includes at least a secret portion that is encrypted.

62. The method of claim 61, wherein the secret portion is encrypted with a public key and can be decrypted with a corresponding private key.

63. The method of claim 44, wherein the non-random portion of the combination code includes a secret encrypted portion containing tracking information.

64. The method of claim 63, wherein examining the goods comprises:
decrypting the combination code; and
decrypting the secret portion of the decrypted combination code to determine the tracking information.

65. The method of claim 44, wherein associating the encrypted combination codes with one or more goods comprises applying the encrypted combination codes to the one or more goods.

66. The method of claim 44, wherein examining the goods comprises:
determining whether the code when decrypted matches a prescribed code; and
indicating whether the matched prescribed code is a duplicate based on the
determination.

67. The method of claim 44, wherein examining the goods comprises:
determining whether the code when decrypted matches a prescribed code; and
indicating that a counterfeit has been detected if the prescribed code is a duplicate.

68. A system for detecting a diversion of goods from a desired channel or channels
of distribution, comprising:

means for generating a combination code, wherein a portion of the combination code is
a random code and the other portion is a non-random code;

means for encrypting the combination code, wherein each desired channel of
distribution has a unique encryption key to perform the encryption of the combination code;

means for applying the encrypted combination code to the goods; and

means for verifying whether an encryption key used for encrypting the combination
codes on the inspected goods within the desired channel or channels of distribution matches the
encryption key which is uniquely dedicated for the desired channel or channels of distribution,
thereby identifying whether a diversion of goods has occurred.

69. The system of claim 68, wherein the verifying means further comprises:
means for decrypting the encrypted combination code applied to the goods; and
means for comparing the non-random code of the decrypted combination code with a
known non-random code.

70. A method of determining whether a tax has been paid properly, comprising:
creating a plurality of valid encrypted combination codes;
supplying those encrypted combination codes to an entity for application to the goods;
decrypting the combination code using a public key; and
determining whether the tax has been paid properly using the decrypted combination
code by evaluating whether the decrypted combination code is one of the plurality of valid
combination codes.

71. The method of claim 70, further comprising destroying the codes after use.

72. The method of claim 70, further comprising destroying or confiscating the goods if the tax has not been paid properly.

73. A method of determining whether a tax has been paid properly, comprising: using a public key decrypting a combination code associated with respective goods; and determining whether the tax has been paid properly using the decrypted combination code by evaluating whether the decrypted combination code is one of a plurality of valid combination codes.

74. The method of claim 73, further comprising destroying the codes after use.

75. The method of claim 73, further comprising destroying or confiscating the goods if the tax has not been paid properly.

76. A method of determining whether a tax has been paid properly, comprising supplying a plurality of encrypted combination codes, which upon decryption using a public key can be evaluated to determine whether the decrypted combination codes is one of a plurality of valid combination codes as a representation of tax having been properly paid, for association respective goods.

77. A method of identifying items, comprising associating with respective items respective encrypted combination codes each composed of a unique random portion and a non-random portion, and wherein the non-random portion includes at least a secret portion that is encrypted.

78. The method of claim 77, wherein the secret portion is encrypted with a public key and can be decrypted with a corresponding private key.

79. The method of claim 77, wherein the non-random portion of the combination code includes a secret encrypted portion containing tracking information.

80. The method of claim 79, further comprising decrypting the combination code; and decrypting the secret portion of the decrypted combination code to determine the tracking information.

81. The method of claim 77, said associating comprising applying the respective combination codes to respective items or labels associated with the items.

82. The method of claim 81, said applying comprising applying a bar code.

83. The method of claim 81, said applying comprising applying alphanumerics.

84. A method of preparing authenticating indicia for items, comprising composing a plurality of combination codes, each including a unique random portion and a non-random portion, and wherein the non-random portion is non-random portion includes at least a secret portion that is encrypted, and encrypting the combination codes.

85. The method of claim 84, wherein the secret portion is encrypted with a public key and can be decrypted with a corresponding private key.

86. The method of claim 84, wherein the non-random portion of the combination code includes a secret encrypted portion containing tracking information.

87. The method of claim 84, further comprising applying the encrypted combination codes to goods for use to determine whether a required tax or duty has been paid.

88. A method of obtaining information regarding items comprising the method of claim 41 and

decrypting the combination code; and

decrypting the secret portion of the decrypted combination code to determine the information.

89. The method of claim 85, further comprising selecting the non-random portion as at least one of a readable word, number or alphanumeric.

90. A method of checking authentication of an item identified by a respective encrypted combination code of a plurality of encrypted combination codes, each combination code including a unique random portion and a non-random portion, and wherein the non-random portion includes at least a secret portion that is encrypted, comprising

checking the decrypted combination code to determine whether the non-random portion is correct.

91. The method of claim 90, wherein the secret portion is encrypted with a public key and can be decrypted with a corresponding private key.

92. The method of claim 90, wherein the non-random portion of the combination code includes a secret encrypted portion containing tracking information.

93. The method of claim 90, further comprising examining the goods including decrypting the combination code; and
decrypting the secret portion of the decrypted combination code to determine information about the item.

94. The method of claim 90, said checking comprising viewing the non-random portion of the decrypted combination code to determine whether it is the same as the non-random portion used to compose the combination code.

95. The method of claim 90, if at the checking step the non-random portion is correct, the method further comprising further checking the decrypted combination code to determine whether the random portion of the decrypted combination code is unique.

96. The method of claim 95, further comprising storing in a database or the like the random portions of respective combination codes and an indication of whether such random portion already has been encountered as part of an encrypted combination code identified with a respective item, said further checking comprising determining whether the random portion of a decrypted combination code has already been encountered, thus indicating non-uniqueness of such random portion.

97. A method of verifying authenticity or other information of goods or the like using an encrypted code, comprising determining whether an encrypted code is present, determining whether the code when decrypted matches a prescribed code, and determining whether the matched prescribed code is a duplicate.

98. A method of verifying authenticity or other information of goods or the like, comprising, using an encrypted code, comprising determining whether an encrypted code is present, determining whether the code when decrypted matches a prescribed code, determining whether the matched prescribed code is a duplicate, and if a duplicate, then indicating that at least one or the other of the goods is a counterfeit.

99. A method of coded labeling of goods, process or the like, comprising obtaining a random number, alphanumeric or the like code and a further non-random string, alphanumeric, or the like code; coupling the codes to obtain a combination code with a random portion and a non-random label portion; encrypting the combination code; applying or associating the encrypted combination code to or associating it with goods, process or the like; and verifying authenticity of the goods, process or the like or of some characteristic thereof by decrypting that which was encrypted and determining whether the non-random label portion is found and/or is correct.

C 1
004
100. A method of using coded information, comprising obtaining a random code intended to be coupled with a further non-random code, obtaining a non-random code including at least a secret portion that is encrypted to be readable (decrypted properly) only by use of a private key, combining the non-random code with the random code to obtain a combination code; encrypting the combination code; applying the encrypted combination code or associating it with an object, item, good, program, etc.; and verifying authenticity of the object, etc. or of some characteristic of the object, etc. by decrypting that which was encrypted, including decrypting the secret portion by a private key.

101. The method of claim 100, said decrypting including decrypting the combination code using a public key and subsequently decrypting the secret portion using a private key.

102. A method of tracking or like function using in a non-random portion of a combination code a secret encrypted portion containing the tracking or like function information, comprising forming a combination code, encrypting the combination code, and applying the encrypted combination code to goods or the like.

103. The method of claim 102, further comprising and applying the encrypted combination code to goods or the like; and subsequently decrypting the combination code and then the secret portion of the combination code to determine the tracking or the like information.

104. A computer program comprising computer implementable instructions for configuring a computer to operate in accordance with the method of claim 77.